What is claimed is:

1. A method for charged particle beam exposure using a plurality of charged particle beams to be irradiated on a sample and using exposure data for exposing a predetermined pattern on a sample, the charged particle beams being arranged in a matrix consisting of a row component and a column component and having different current quantities in a column direction, said method comprising the steps of:

generating control data by converting said exposure data into data for setting the number of turning on/off of a plurality of said charged particle beams arranged in said matrix in accordance with a line width of the predetermined pattern to control a plurality of said charged particle beams;

transferring said control data to a control unit for controlling a plurality of said charged particle beams arranged in said matrix; and

deflecting a plurality of said charged particle beams such that a plurality of said charged particle beams arranged in the column direction of said matrix are irradiated on different positions on the sample by data transferred to said control unit at a same time and are irradiated on a same position on the sample by data transferred to said control system at different times.

2. The method for charged particle beam exposure according to claim 1,

wherein a plurality of said charged particle beams are weighted in powers of 2 to have different charge quantities.

3. A method for charged particle beam exposure using a charged particle beam source, in which a plurality of charged particle beams having different charge quantities are arranged in a matrix consisting of rows and columns, comprising the steps of:

separating exposure data for exposing a predetermined pattern on a sample into data of every column for driving said charged particle beam source;

converting exposure dose of said column into weighted gradation data;

storing said converted data into a storage section;

transferring the data from said storage section to a drive section of said charged particle beam source; and

irradiating the charged particle beam on a predetermined region on the sample by operating said charged particle beam source in accordance with said transferred data.

4. The method for charged particle beam exposure according to claim 3,

wherein said transferring step has a control clock and includes a step of delaying the gradation data weighted in said control clock with a shift register.

5. The method for charged particle beam exposure according to claim 3,

wherein said irradiating step is added with a deflecting step for deflecting the charged particle beam from said charged particle beam source.

6. A method for charged particle beam exposure using a plurality of charged particle beams having different current quantities and using exposure data for exposing a predetermined pattern to a sample, comprising the steps of:

separating said exposure data into two systems of number data depending on a dimension resolving power and exposure dose data at the time of exposure of a single charged particle beam to control a plurality of said charged particle beams having different current quantities;

storing said separated number data and exposure dose data into a storage section;

operating said exposure dose data and said number data such that the charged particle beam having exposure dose of said exposure dose data is turned on for the number of said number data; and

irradiating a plurality of said charged particle beams on the sample by giving the data generated in said operating step to a plurality of said charged particle beams.

7. The method for charged particle beam exposure according to claim 6, further comprising the step of:

transferring the separated exposure dose data which is converted into a

binary number to a shift register setting a delay amount in accordance with a weight amount, after said storing step.

8. A method for charged particle beam exposure using a plurality of charged particle beams having different current quantities and being arranged in a matrix consisting of a row component and a column component, comprising the steps of:

dividing a predetermined pattern into meshes on a sample;

forming a map separated into number data for every said mesh and exposure dose data in which a pattern density is considered, the map consisting of a row component and a column component;

storing the number data and the exposure dose data of said map into a storage section;

operating said exposure dose data and said number data such that the charged particle beam having exposure dose of said exposure dose data is turned on for the number of said number data; and

irradiating a plurality of said charged particle beams on the sample by giving the data generated in said operating step to a plurality of said charged particle beams.

9. An apparatus for charged particle beam exposure having a plurality of charged particle beam sources for irradiating on a sample and exposure data for exposing a predetermined pattern on a sample, a plurality of the charged particle beam sources being arranged in a matrix consisting of a row component and a column component and having different current quantities in a column direction, said apparatus comprising:

a conversion section for converting said exposure data into data for setting the number of turning on/off of a plurality of charged particle beams arranged in said matrix in accordance with a line width of the predetermined pattern to control a plurality of said charged particle beams;

a storage section for storing the data converted in said conversion section;

a shift register for setting a delay amount for the data from said storage section, the data being converted into a binary number, in accordance with a weight amount;

a control unit for controlling said charged particle beam source with output from said shift register; and

a deflection unit for deflecting a plurality of said charged particle beams such that a plurality of said charged particle beams arranged in the column direction of said matrix are irradiated on different positions on the sample by data transferred to said control unit at a same time and are irradiated on a same position on the sample by data transferred to said control unit at different times.

10. An apparatus for charged particle beam exposure having a plurality of charged particle beam sources in a matrix and exposure data for exposing a predetermined pattern on a sample, a plurality of the particle beam sources having different current quantities, comprising:

a control system for controlling a plurality of said charged particle beam sources having the different current quantities;

a storage section for separating said exposure data into two systems of number data depending on a dimension resolving power and exposure dose data at the time of exposure of a single charged particle beam, and for storing said separated number data and exposure dose data;

a first shift register setting a delay amount for the exposure dose data from said storage section in accordance with a weight amount;

a second shift register setting a delay amount for the number data from said storage section in accordance with a weight amount of said first shift register; and

a deflection unit for deflecting a plurality of said charged particle beams such that a plurality of said charged particle beams arranged in the column direction in said matrix are irradiated on different positions on the sample by data transferred to said control unit at a same time and are irradiated on a same

position on the sample by data transferred to said control system at different times.

11. The apparatus for charged particle beam exposure according to claim 10,

wherein said first shift register comprises an operation section for operating said exposure dose data and said number data.

12. The apparatus for charged particle beam exposure according to claim 10,

wherein a plurality of said charged particle beam sources are arranged such that current emission areas of said charged particle beam sources in the matrix state are the same in a row direction and different in a column direction.

13. The apparatus for charged particle beam exposure according to any one of claim 9 and 10,

wherein said exposure dose data is converted into a binary number, and connection is made between output of the binary number, each digit thereof having a weight at a power of 2, and a plurality of said charged particle beam sources in said matrix state, each having a weight in a ratio of a power of 2, such that the weights of each digit of the output and each said charged particle beam source coincide with each other.